

KDIGO Controversies Conference on Delivering Effective Kidney Care in Lower-Resourced Settings

November 5–8, 2026

Mexico City, Mexico

Scope of Work

Kidney Disease: Improving Global Outcomes (KDIGO) is an international organization whose mission is to improve the care and outcomes of people with kidney disease worldwide by promoting coordination, collaboration, and integration of initiatives to develop and implement clinical practice guidelines. KDIGO also regularly hosts Controversies Conferences on a focused subject pertaining to kidney disease to review state-of-the-art evidence, set priorities for improving patient care and outcomes, and highlight priority areas for research.

BACKGROUND

Chronic kidney disease (CKD) imposes a disproportionate and escalating burden on low- and middle-income countries (LMICs), which account for the majority of CKD cases and CKD-related deaths.^{1, 2} In lower-resourced regions, CKD often presents at younger ages, with incidence and progression driven by poorly controlled hypertension, diabetes, infections, environmental and occupational exposures, and limited access to primary prevention and early detection.^{1, 3-7} Globally, the prevalence of nephrologists is approximately 80-fold lower among low-income versus high-income countries.⁸ Access to kidney replacement therapy is severely constrained: about 20–273 per million population receive dialysis in low-income and lower-middle-income settings, compared with several hundred to over 1,000 per million in upper-middle- and high-income countries.⁹ Transplantation programs are also underdeveloped, making kidney failure effectively a fatal condition for many patients in LMICs. Together, these clinical and structural inequities translate into substantial excess premature mortality, economic hardship due to out-of-pocket costs, and widening global disparities in kidney health, all

underscoring the urgent need for investment in prevention, early detection, and affordable kidney care in lower-resourced settings.^{1, 7, 8, 10-12}

The possibility of meaningfully preventing or delaying progression of kidney disease and kidney failure has improved dramatically over the past few years with the introduction of therapies such as sodium-glucose cotransporter-2 inhibitors (SGLT2i), mineralocorticoid receptor antagonists (MRA), and glucagon-like peptide-1 receptor agonists (GLP-1 RA) in addition to the previously established inhibitors of the renin-angiotensin-aldosterone system. These medications are included in the latest global guidelines, and most are now included in the WHO Essential Medicines List, but they remain inaccessible or unaffordable for many patients in many settings.¹³⁻¹⁵

As a principle, “effective coverage” refers to the proportion of a population in need of a service that had a positive health outcome from the service.¹⁶ For individuals with kidney disease, many steps are required to maintain or improve kidney health over the long term. Effective coverage for CKD care means ensuring the following: i) the majority of people at risk of kidney disease are screened appropriately; ii) those who screen positive for CKD have equitable and affordable access to a health center where the healthcare providers are aware of CKD and what to do; iii) appropriate resources are sustainably available and accessible at health centers; iv) clinical pathways are in place to guide the healthcare providers to treat and monitor kidney disease, its risk factors, and its comorbidities; v) patients are educated and empowered to manage their disease, adhere to treatment recommendations, and optimize their lifestyles to protect their kidney health; vi) long-term follow-up is conducted to prevent progression of CKD; and vii) data are captured to monitor, evaluate, and improve program outcomes and permit tracking of the national CKD burden. The components of quality care are the same in both low- and high-resourced settings, although the pathways, tools, and thresholds differ.

This conference aims to promote implementation of effective and equitable kidney care in lower-resourced settings through identification of feasible strategies and pragmatic solutions to align relevant stakeholders towards the common goals of improved early detection and implementation of integrated and guideline-informed treatment and

follow-up of CKD; strengthening capacity building; and enhanced globalization in kidney research.¹⁷

CONFERENCE OVERVIEW

Professor Sanjib Sharma (BP Koirala Institute of Health Sciences, Nepal) and Dr. Valerie Luyckx (University of Zurich, Switzerland) will co-chair this conference. The format of the conference will involve topical plenary session presentations followed by focused discussion groups that will report back to the full group for consensus building. This highly interactive conference will invite key thought leaders and relevant stakeholders (i.e., primary care, health administrators, nephrologists, health economists, patients, nursing, community representatives, and other allied health professionals, policy and advocacy experts and implementation researchers, etc.) who will critically review the literature and our current state of understanding in this area and address the clinical issues outlined in the **Appendix: Scope of Coverage**. The conference output will include publication of a position statement to help guide KDIGO and others to better address barriers to provision of effective kidney care in lower-resourced settings.

APPENDIX: SCOPE OF COVERAGE

Breakout Group 1: Increasing Access to Diagnostics and Therapeutics as Part of Effective CKD Care

Objective: Describe the necessary diagnostics and therapeutics for effective kidney care, and outline strategies to improve access.

1. What does fundamental kidney care look like in resource-constrained settings?
 - a. What do “quality” and “effective” kidney care look like across different resource settings?
 - b. How do we define and measure “effective coverage” in CKD to ensure it translates to actual health benefits?
 - c. What are the minimum “kidney care package” components that should be in any national universal healthcare benefit design, regardless of income level?
 - d. How do we improve the affordability of access to all components of effective care (e.g., diagnostics, therapeutics, and follow-up)?
2. What are unique shortcomings in resource-constrained settings that impede implementation of guideline-concordant kidney care?
 - a. What is needed and what is currently missing or insufficiently available or accessible to detect and treat kidney disease in resource-constrained settings and why?
 - b. What are financial and logistical or administrative barriers (such as failing to anticipate supply needs, stockouts, maintenance of equipment) to improving fundamental kidney care, and what are strategies or examples for overcoming them?
3. What current or new strategies are likely to be successful in increasing diagnostic access?

- a. What is the spectrum of diagnostics needed in primary care, from individual tests to multi-test strategies? Do any data exist on costs, performance?
 - b. Consider the benefits vs. feasibility of various available tests. Is there a sweet spot? Does this change in different locations?
 - c. What diagnostics are currently available in resource-constrained settings?
 - d. What are advantages and disadvantages of the various diagnostics available?
 - e. How best can diagnostics be scaled up to meet the needs in primary care?
 - f. What are quality thresholds of diagnostics that are necessary for diagnosis and follow-up of kidney disease in primary care?
 - g. Are additional diagnostics required to identify individuals who need referral for higher levels of care?
 - h. What interventions have demonstrated effectiveness in increasing access to diagnosis?
4. What current or new strategies are likely to be successful in increasing access to therapeutics?
 - a. How do we facilitate estimation of GFR and utilize the KDIGO heatmap in primary care to support therapeutic decision making?
 - b. Is there a ranking of need? What is the incremental value of ACEi, SGLT2i, GLP1 RA, finerenone, etc. in terms of prioritization for primary care?
 - c. What are barriers to keeping these medications on the shelves and accessible to patients? For example, stockouts, drug licensing, and cost? Absence of data of effectiveness in the local population?
 - d. What would be the role for a cardiovascular-kidney-metabolic polypill? Review evidence on utility/advantages/disadvantages of polypills for cardiovascular disease? Could polypills be used for kidney health?
 - e. What interventions have demonstrated effectiveness to increase sustainable access to therapeutics?

5. How can we leverage novel or existing technologies or infrastructure to promote feasible adherence to guideline-concordant care? (i.e., point-of-care, telehealth, mobile health units)
 - a. What are novel technologies that can boost access to and quality of care?
 - b. How can access to these technologies be increased?
 - c. How do currently available point-of-care creatinine devices compare with standardized laboratory methods for estimating glomerular filtration rate across different populations, age groups, and clinical settings?
 - d. Which devices provide sufficient analytical and clinical accuracy to support diagnosis, staging, and longitudinal follow-up of CKD?

Breakout Group 2: Overcoming Workforce Limitations

Objective: Identify practical, scalable, and context-specific strategies to expand kidney care workforce capacity in regions with limited nephrology workforce, while maintaining quality of care and equitable access.

1. What is the minimum workforce composition required to deliver fundamental kidney care across different levels of the health system (primary, secondary, tertiary)?
 - a. Which kidney care job tasks can be shifted to primary care physicians, non-physician health workers (e.g., pharmacists), nurses/nurse practitioners, and other allied health workers (e.g., community health workers, dietitians, physician assistants, educators)?
2. What are the most effective and scalable approaches to building kidney care capacity among non-specialist healthcare workers?
 - a. What delivery models work best for education and capacity building for different levels of healthcare workers (e.g., in-person mentorship, tele-education, modular digital learning, micro-certification pathways, training of trainers model)?
 - b. Should there be standardized “Kidney Care Essentials” curricula globally with combined teaching/training across different healthcare worker groups, with local adaptation?
 - c. What are the roles of competency assessments, certification, audit, and feedback to ensure quality standards?
 - d. Are there legal or regulatory barriers that may impact task shifting or strengthening?
3. How can innovative care models and digital technologies help extend the reach of the limited kidney care workforce?
 - a. What has been the experience with tele-nephrology, multidisciplinary CKD clinics, advanced practice providers, and cross-trained healthcare workers?
 - b. How can AI-assisted triage, clinical decision support systems, remote monitoring, and mobile health tools support kidney care delivery?
 - c. What barriers—connectivity, regulation, reimbursement, or digital literacy—must be overcome for successful implementation?
 - d. Which innovations are most realistic in low-resource settings?

4. How can countries attract, retain, and motivate a sustainable kidney care workforce, particularly in underserved areas?
 - a. What are the strongest drivers of nephrology shortages in underserved areas (e.g., financial disincentives, burnout, limited career progression, professional isolation, geographic maldistribution, others)?
 - b. What strategies could effectively improve workforce retention (e.g., rural allowances, incentive packages, dedicated rural career pathways, protected academic time, and local training pipelines)?
 - c. How can health systems better support healthcare workers in underserved settings to reduce burnout and improve job satisfaction?
 - d. How should workforce deployment and support evolve as kidney care services scale from local pilot programs to province/state and national levels?

5. How can countries (especially low-resource) reduce the loss of trained kidney care professionals through international migration (to high-resource areas) while maintaining global collaboration and professional development opportunities?
 - a. What are the major drivers of nephrology workforce migration internationally (e.g., salary differentials, working conditions, career advancement opportunities, research opportunities, or training pathways)?
 - b. Which strategies have been most successful in improving retention of trained specialists (such as bonded training, return-of-service schemes, return incentives, international twinning, or distributed academic partnerships)?
 - c. How can international nephrology organizations better support workforce development without fostering dependency?
 - d. What policies or bilateral agreements can help balance workforce mobility with the need to strengthen local health systems?

6. What evidence and metrics are needed to guide future workforce planning and scale-up efforts in kidney care?
 - a. Which outcome indicators and metrics (e.g., workforce retention/density, competency scores, economic, patient outcomes) should be standardized across countries?
 - b. What evidence gaps must be addressed to guide future workforce planning (e.g., comparative effectiveness of task-shifting models,

workforce-to-patient ratio thresholds, cost-effectiveness of tele-nephrology, retention intervention, impact of patient self-management training on workforce demands)?

- c. How should scalability, sustainability, and equity be measured?
- d. What key evidence for the kidney care workforce should be translated into policy?

7. How best to promote patient empowerment and activation?

- a. What specific strategies can increase patient activation so that individuals become champions of their own care?
- b. What role can health literacy assessment tools play in tailoring patient education to different educational backgrounds, particularly in LMICs?
- c. How can patient and community education reduce unnecessary specialist dependence?
- d. What self-management capabilities should be prioritized for CKD patients and caregivers?
- e. How can community-based literacy programs improve earlier detection and adherence?
- f. How can self-care be operationalized for patients with CKD or CKD risk (hypertension, diabetes) in resource-limited homes? What simple, evidence-based actions should be prioritized, and how should adherence be supported?
- g. Can digital tools be leveraged to support health literacy and self-care?

Breakout Group 3: Integrating Optimal Kidney Care within Healthcare Systems

Objective: Describe strategies to optimize horizontal integration of kidney care through enhancing awareness among healthcare decision-makers on what is required to deliver quality kidney care as well as strategies to empower local healthcare providers to advocate for and deliver quality kidney care

A) Organization and Integration of Kidney Care

Structural Integration in Primary Care

1. What is the most suitable CKD management program in primary care across settings? This entails risk, detection, diagnosis, treatment, monitoring, and follow-up.
 - a. What needs to happen and by whom?
 - i. CKD screening (case finding) at the community and primary healthcare level
 - ii. The role of other healthcare professionals (e.g., community health extension workers, dieticians, and nurses for example) building their capacity to deliver CKD care
 - iii. Optimization of care and continuity when required via appropriate involvement of specialty care
2. Are there country examples of successful program integration? If so, where does kidney care fit into the larger healthcare provision structure? Are there strategies from other chronic disease programs (e.g., hypertension, diabetes, TB/HCV/HIV) that can be emulated in LMICs for early detection, prevention, and management of kidney disease?

Common barriers and challenges and mitigation strategies

3. What is clinical inertia, and what can support front-line healthcare professionals to overcome clinical inertia in CKD management (e.g., diagnosis, monitoring, and in particular the initiation of guideline-recommended therapies)?

Loss to follow-up (and continuity of care) in the community

4. How can health information systems (such as electronic health records), communication technologies (phone, tablets, etc.), and AI support the delivery of longitudinal CKD care in lower-resource settings?

B) Extending Universal Health Coverage to Kidney Care

5. How can CKD care be included in universal healthcare as part of the existing non-communicable disease coverage? For example, Thailand's Universal Coverage Scheme, commonly known as the 30 Baht Scheme

Tracking disease burden and clinical performance metrics

6. What tools and metrics are required to monitor performance on CKD care at the country level?
 - a. Process measures for delivery of effective kidney care (e.g., proportion of people at-risk screened for CKD, proportion diagnosed with CKD and initiated on appropriate medications such as statins, RAASi, SGLT2i, etc. if accessible)
 - b. Monitoring and feedback mechanisms (i.e., safeguards for adherence to care, referral completion, community registers)
 - c. Assessment of scalability and sustainability. How can we better define the contextual factors (e.g., financing, governance, supply chains, digital infrastructure) for a successful scale-up and embed adaptive learning into national rollout of a CKD care program? Any examples of successful models across countries?
7. How have countries that successfully scaled primary care-based CKD management (e.g., Thailand and Brazil) achieved widespread implementation, and what lessons can be adapted to other health systems?
8. What lessons can be learned from resilient healthcare delivery models for CKD and other NCDs that have successfully provided continuous longitudinal care in resource-constrained settings, and how can these lessons inform health system strengthening elsewhere?

The economic case for payers

9. Provide an overview of existing cost effectiveness data for early detection and treatment of kidney disease in LMICs.
10. What data should be collected at the primary care level to support cost-effectiveness analysis and monitoring?
 - a. Local costs data for diagnostics (Albustix, serum creatinine tests)
 - b. Therapeutic costs (RAASi, SGLT2i)
 - c. Costs of care for adverse health outcomes (dialysis, transplant, hospitalizations)

Optimizing resource allocation

11. What principles should guide the fair allocation of limited healthcare resources to promote equitable kidney care and reduce disparities? For example, what role can integrated financing approaches, such as pooled non-communicable disease funding mechanisms (e.g., diabetes mellitus, hypertension, cardiovascular disease), play in embedding kidney care within broader health system financing frameworks, thereby improving affordability and access without requiring separate kidney-specific budgets?

C. Multi-Stakeholder Engagement Beyond the Healthcare Team

Global health organizations (for example, WHO, Médecins Sans Frontières, Partners in Health)

12. Which existing national or subnational health programs could be leveraged to integrate kidney care into routine health services with no or minimal additional resources? For example, WHO HEARTS, WHO Diabetes Compact, PEN, tuberculosis, maternal and child health programs.

Community-led support

13. What strategies can be leveraged to strengthen community engagement and mobilize peer support groups and patient navigators to enhance kidney care delivery?

Public-private partnership

14. What is the role of integrating public and private sectors for delivering effective primary care?

Role of healthcare industry in contributing to quality and sustainable care

15. What is the optimal framework for industry engagement in kidney care that balances patient-centered care, equity, and long-term sustainability?
16. What can the kidney care community learn from successful global access initiatives for HIV, hepatitis C, tuberculosis, and vaccines? How can countries leverage pooled procurement, collective price negotiations, market-shaping strategies, and innovative financing models to improve equitable access to essential kidney diagnostics and therapies?

D) Global Nephrology Research Equity

Clinical trial diversity

17. How can we overcome systemic barriers to conducting clinical trials in resource-limited settings and ensure that diverse populations gain timely and equitable access to innovative therapies?
18. How to best support implementation research in the LMICs?
19. How to raise awareness of the differing ethical implications with research in LMICs compared to HICs?

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